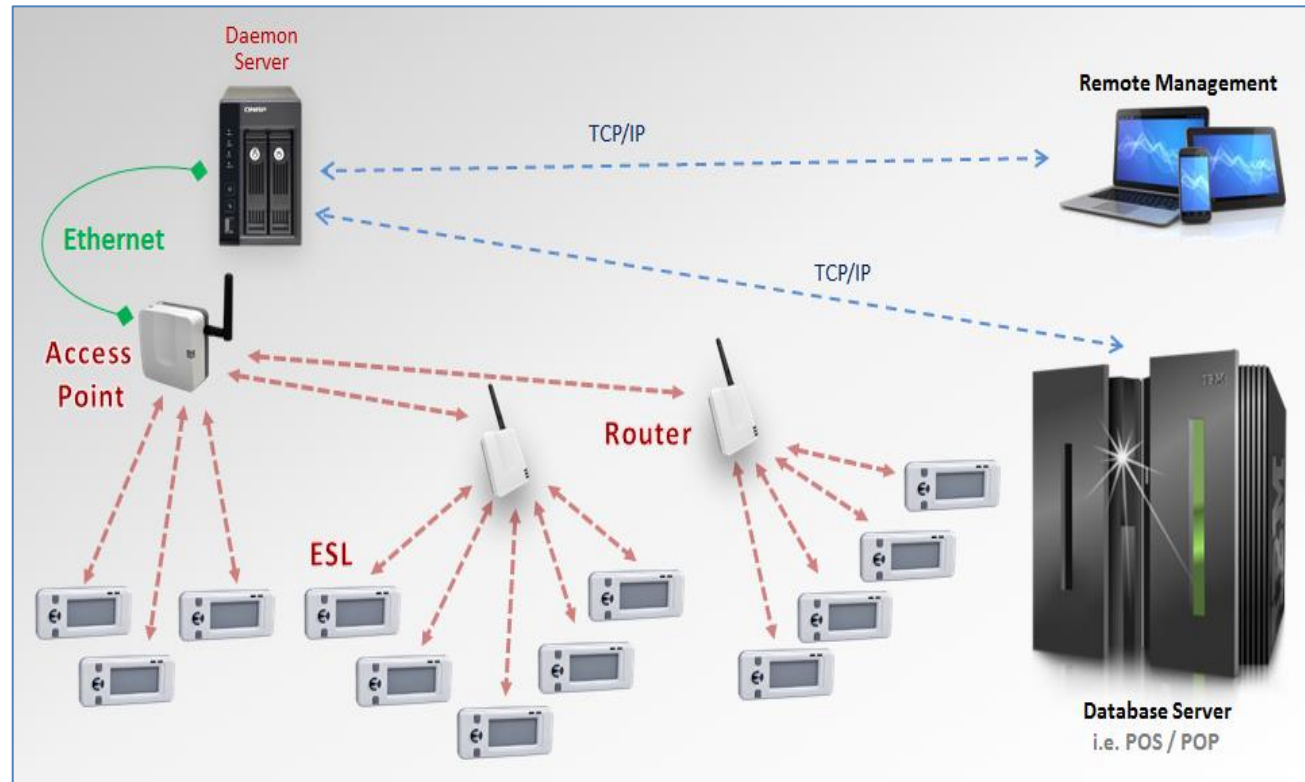


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Turn-Key Electronic Shelf Labeling Solution

- **Ultra-low power consumption**
More than 5 years battery life for graphic ePaper tags (4 updates / day and 30 sec sync).
- **Innovative communication protocol**
Proprietary RF protocol adopting TDMA and FDMA technologies enables a reliable, scalable, and low power wireless communication system.
- **Fast transmission**
7,000 to 20,000 graphic tags full updates per hour depending on size and color.
- **Truly interactive communication**
More benefits than '2-way' communication by offering status updates such as battery level and link quality.
- **Sub-GHz RF communication**
No RF interference with existing Wi-Fi and other 2.4 GHz devices; covers longer range of communication than using 2.4 GHz RF.
- **Highly scalable architecture**
Tree topology enables efficient radio resource utilization and scalability.



The Electronic Labeling System Architecture (ELSA)

- Contact -

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Web: www.imintech.com

Address: 8181 State Street, South Gate, CA 90280

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ELSA Tags



High quality ePaper information display



Easy to mount on existing mainstream rails and holders



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Data Sheet ELSA Tags

Model	1.54-inch series	2.1-inch series	2.9-inch series	4.2-inch series
Height x Width x Thickness (mm)	48 x 38 x 12.8	38.2 x 75 x 11.9	42 x 91 x 11.2	93.4 x 106.5 x 14.1
Display active area, H x W (mm)	27.4 x 27.4	23.7 x 48.4	28.3 x 66.1	63.4 x 84.6
Weight (g)	24	35	42	89
Display, main features				
Display technology	E-Ink ePaper display (active matrix)			
Resolution	200 x 200	212 x 104	296 x 128	400 x 300
Pixels	40,000	22,048	37,888	120,000
DPI	184	111	112	120
Colors	monochrome (black and white), color (red, black, white)			
Operating features				
Network	<i>Self-Networking:</i> - Automatically connected to network when powered - Automatic link recovery when connection is disturbed			
Frequency band	Sub-GHz ISM			
# label updates / hour	7500	7500	7500	2500
Operating temperature (Celsius)	0~50			
Battery type (removable coin cell)	1x CR2450	3x CR2032	3x CR2032	3x CR2450
Battery life ¹	≥ 5 year			
Encryption	128-bit AES			
Compliance	RoHS, CE			

¹ For 4 updates per day and 30 seconds synchronization.

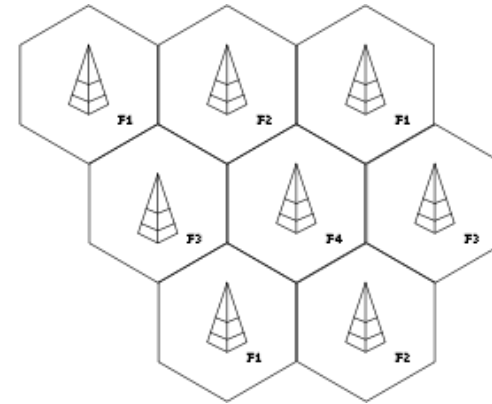
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ELSA Infrastructure

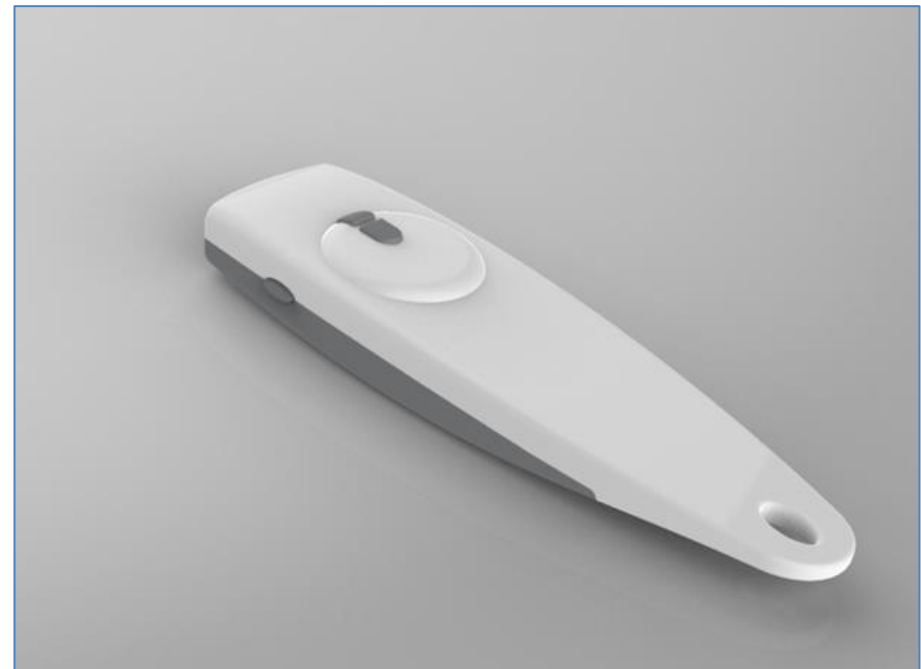
Cellular-Inspired Wireless Network



Access Point



Router



Barcode Scanner

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Data Sheet ELSA Infrastructure

Model	Access Point	Router	Barcode Scanner
Network features	<i>Gateway:</i> - TCP/IP and Platanus network <i>Service handler and dispatcher:</i> - Sub-GHz network (Platanus) - Intelligent resources scheduling - Support: static IP/ DHCP / Telnet	<i>Self-Networking:</i> - Automatically connected to AP when powered - Automatic recovery when connection is disturbed <i>Service handler and dispatcher:</i> - Sub-GHz network (Platanus) - Intelligent resource scheduling - Data routing, storage, and forwarding for high network efficiency	Wireless barcode scanner to associate product and ESL system
Network Interfaces	- LAN: 10/100 BasT auto MDIX - Sub-GHz network (Platanus)	Sub-GHz network (Platanus)	Sub-GHz network (Platanus)
ESL tags supported	15,000 ESL tags	1,000 ESL tags	5,000 ESL scans on one battery charge
Operating range	50~100m (line-of-sight)		
Encryption	128-bit AES		
LED status	Power on, connected		
Height x Width x Thickness (mm)	78 x 68 x 30.3 (antenna excluded)	68.5 x 49 x 33 (antenna excluded)	102.7 x 40 x 19.3
Antenna	External Sub-GHz	External Sub-GHz	Embedded Sub-GHz
Power Supply	5V DC-powered	5V DC-powered	Embedded battery: - Li-Polymer battery pack - Capacity: 3.7V, 320 mAh - Charged through USB port